

### ABSTRACT OF THE DISCLOSURE

The method for deriving a GRAZ seismic attribute file entails inputting a horizon file and an attribute file, obtaining the gradient of the horizon file thereby producing a horizon vector file, indexing from the attribute file data at corresponding geographic locations of the horizon file, forming an attribute file, obtaining the gradient of the attribute file thereby producing an attribute vector file, and performing a compilation of the horizon vector file and the attribute vector to ascertain if changes are in a direction towards a surface datum for a narrow time range and depth range and are detected and measured.